

presently held by cellular providers. Under the DOJ Guidelines, market concentration is frequently measured using the Herfindahl-Hirschmann Index (HHI). The DOJ Merger Guidelines indicate that HHI values falling between 1000 and 1800 reflect a moderately concentrated market.⁶

In their comments, CCAC presented a study of HHI market share concentration prepared by Charles River Associates based upon values under four market configuration assumptions (reference: Tables K-N of CCAC Comments). These four scenarios assumed: (1) Two cellular and seven PCS providers; (2) two cellular, seven PCS and one Specialized Mobile Radio (SMR) providers; (3) two cellular carriers with PCS licenses and five PCS providers; and (4) two cellular carriers with PCS licenses, five PCS providers and one SMR provider. The Charles River Study found only moderate concentration in a range between 1220 to 1626 among the four scenarios.

DRA disputes the validity of the Charles River HHI values which assume the market will divide according to spectrum allocations and which fail to reflect the current market share of existing carriers or the service limitations of the competing technologies. CRA computes revised HHI values using the January 1994 forecast of market shares of the Personal Communications Industry Association (PCIA). According to the PCIA forecast, PCS will have only a 3.1% market penetration by 1998 compared with a 12% penetration for cellular. Even by 2003, while PCS is predicted to have a 10.4% market penetration, cellular is expected to have grown to 17.4%.

⁶ The HHI equals the sum of the square of the market shares of the respective competitors in a given market.

For purposes of computing HHI indices, CRA assumes two hypothetical market scenarios: (1) maximum market concentration allowed by the FCC occurs (40 MHz per competitor), and only one satellite and one ESMR competitor exist; and (2) minimum concentration occurs in which the PCS licenses are as distributed as possible under FCC spectrum allocation rules, with three ESMR competitors. The market shares for the respective PCS competitors are distributed according to the spectrum allocations authorized by the FCC. The market shares for the other technologies are distributed evenly among the assumed competitors. With these assumptions applied to the PCIA market penetration forecasts, CRA computes the following HHI forecasts:

Scenario	1998 Forecast HHI	2003 Forecast HHI
Max. Concentration	2771	2160
Min. Concentration	2463	1704

CRA notes that under the DOJ Merger Guidelines, HHIs over 1800 are considered to reflect "highly concentrated" markets, and that any merger that increases an HHI in this range by more than 100 points is likely to create or enhance the market power of the competitors. CRA's HHIs fall well above the "highly concentrated" floor. By 1998, the cellular carriers are expected to retain control over 68.7% of the total mobile telephone market. CRA concludes that such market power will permit cellular carriers to remain dominant price leaders. Thus, according to CRA, even to the extent the technical, institutional, and regulatory hurdles confronting the emerging PCS/ESMR industry can be somewhat overcome, the mobile telephone market will continue to be highly concentrated, with two cellular duopoly carriers maintaining a dominant position for at least five years.

Discussion

The question of whether the newly emerging technologies can presently be considered as viable competition for cellular

depends on the speed with which these technologies are expected to become commercial on a broad scale, as we review below. We agree that alternative technologies such as PCS and ESMR have the potential to ultimately become close substitutes for a large number of cellular customers on a widely available basis in the future. Such widespread substitutability is not currently a reality, however. We conclude that, at present, alternative wireless technologies must overcome the various impediments enumerated above before they can constitute viable substitutes for cellular service. As such, it is premature to expand the definition of today's cellular market to include these new technologies, except as marginal influences in certain limited areas. While we believe it is only a matter of time before these new providers overcome market obstacles to become viable competitors, it would be irresponsible to abdicate our regulatory oversight before those competitive forces are in place. We consider below the various constraints leading us to this conclusion.

As noted above, one of the emerging contenders in the wireless communications market is PCS. The FCC has recently opened up the potential entry of this market through allocation of 160 MHz of radio spectrum for PCS, subdivided into 120 MHz of licensed spectrum and 40 MHz of unlicensed spectrum. The FCC established eligibility for PSC spectrum allocation through a bidding auction that was originally to begin in May 1994 for narrowband PCS. As noted by GTE, it was intended initially that PCS systems would have no call-receiving capability and limited ability to handle movement across cell sites during a call. As now contemplated, at least some digital PCS systems will have these capabilities and thus be fully competitive with cellular.

The geographic extent of a typical mobile service market will likely expand in the future as new technologies are licensed and begin competing with cellular service. The FCC has designated much broader service territory boundaries for PCS providers

relative to cellular providers, using Rand McNally "Major Trade Areas" (MTAs) as market boundaries.

Another constraint involves the ability of alternative providers to shift their resources from one use to another to supply service in competition with another provider.

At present, only one firm within California, Nextel, is positioned to begin to offer ESMR service beginning this year. On February 13, 1991, the FCC authorized Nextel to construct and operate ESMR systems in major US cities. Nextel began testing ESMR service in Los Angeles in August 1993 and now operates a Digital Mobile Network covering about 18,000 square miles in Los Angeles. Nextel anticipates completing its testing in the second quarter of 1994. Nextel has acquired 2500 SMR radio frequencies from Motorola. MCI has recently invested \$1.3 billion in Nextel. Nextel expects to eventually compete with existing wireless services, including cellular licensees. Presently, there are only 500 ESMR California subscribers, all in the LA area. Thus, at the present time, ESMR is a viable market alternative to cellular service only for a limited number of customers in the LA area. In other MSAs outside of LA, ESMR is not even available. With consolidation of ESMR licenses, firms can acquire sufficient bandwidth to offer new services and compete in larger markets in the future. As stated by Fresno MSA, Nextel is positioning itself to become a one-stop provider for all-around communications, integrating cellular, paging, voicemail, textmessaging, and two-way radio into one piece of equipment. Fresno also notes that since Nextel is not subject to an FCC-mandated build-out requirement, it can concentrate on the more lucrative high usage areas initially and widen its coverage later. This provides Nextel a competitive advantage that was not available in the initial phases of the cellular industry.

As noted by Cellular Services, Inc. (CSI), ESMR providers are presently using their existing spectrum licenses for dispatch

and paging services. While digital technology enhances the utilization of the spectrum, it does not guarantee a major expansion of competition for cellular. Nextel's substantial construction costs will constrain it from offering rates that exert competitive pressure on cellular carriers.

As noted in the OII, until SMR providers are actually operational, the extent of direct competition to existing entrenched cellular providers who enjoy the use of substantial bandwidth in comparison to SMRs is unknown. In this OII, however, we consider the impact of their presence or potential entry on traditional wholesale cellular service prices. We also consider whether the arrival of effective competition will be expedited with regulatory safeguards geared at encouraging the development of a competitive market.

We also note that the FCC, itself, has recently concluded that current ESMR, SMR and potential PCS licensees possess no market power with which to impede competition for some time, because of cost and marketing constraints. (FCC Order, pp. 58-60.)

Even as ESMR and PCS providers progressively penetrate the mobile telecommunications markets within California, the industry estimates indicate that market share will remain concentrated in the hands of cellular carriers at least for the next few years. The high HHI market concentration estimates for cellular carriers computed by CRA support this view. We find CRA's HHI values, which are based upon actual industry estimates, more reliable than those of CCAC, which assume merely that the market share is allocated in proportion to the amount of spectrum held.

In summary, we conclude that cellular carriers are likely to retain significant market concentration for at least the next few years, particularly given PCIA industry forecasts of limited market penetration by PCS and SMR providers, as noted above. Given the limited availability and substitutability of alternatives to cellular during at least the near term, we must view the

cellular carriers as operating largely free of competitive challenges within the current mobile services industry. As stated above, under FCC licensing rules, only two facilities-based carriers may conduct business in any designated MSA. This market-entry restriction creates a duopoly market with respect to the cellular wholesale industry. Accordingly, an analysis of market concentration and availability of substitutes supports the conclusion that cellular carriers are not subject to significant competition in the majority of market sectors served at the present nor will they be in the near future.

3. Cellular Prices as Evidence of Market Competitiveness

A primary inquiry of this OII is whether cellular prices are unjust, unreasonable, or discriminatory, reflecting concentration of market power and lack of competitiveness. Respondents dispute whether cellular rates are uncompetitive and what inferences to draw from cellular price data as an indicator of competitive behavior.

As a basis for evaluating cellular pricing data, we are primarily interested in wholesale prices. It is primarily at the wholesale level where market power is concentrated in the hands of just two facilities-based duopolists, and where the potential to extract rents above competitive levels is most acute. In our analysis of prices, we also recognize the proliferation in recent years of various promotional contract plans which purport to offer savings to certain targeted customer segments. These plans usually require eligible customers to meet various restrictions and conditions as contrasted with traditional "basic service" which may entail a higher nominal rate but which do not impose the restrictions of the discounted plans.

a. Positions of Parties

Parties representing consumer groups, resellers, and alternative providers argue that cellular rates are too high, and

do not reflect a competitive market. They point to the fact that the rates for basic service charged by duopolists in major California metropolitan markets are identical and have remained unchanged for years while the cost of cellular equipment components has declined significantly. CSI presents a study of the National Cellular Resellers' Association dated January 24, 1994 which ranks cellular service prices in the 30 largest U.S. markets and compares 1988 versus 1994 prices in each market, based on the best rates available for 30 minutes of monthly airtime. The National Cellular Resellers Association (NCRA) study shows that the LA market was the second highest-priced cellular market in the nation, and that rates had not changed since 1988. The San Francisco market was the seventh most expensive, although the reported rates had been reduced about 20% since 1988.

As noted in testimony of DRA before the Senate Committee on Energy and Public Utilities (January 1993), basic cellular service rates in the two largest markets in California were identical between each set of duopolists and were also among the highest in the country based on a comparison with 8 other major cellular markets. (See Appendix 2.)

Nationwide Cellular (a reseller) provided the research study of economist Thomas Hazlett which concluded that cellular duopolists do not set competitive prices. As explained by Dr. Hazlett, traditional economic theory underlying duopoly pricing holds that when only two firms compete, prices will fall somewhere between the extremes of monopoly rents on the high side and full competition on the low side. While duopolists could jointly maximize profits at a monopoly price level, each has an incentive to slightly undercut the other firm and to garner a larger market share. According to Dr. Hazlett, both firms iteratively react to each other's attempts to gain market share by reducing prices. Finally, in equilibrium, both firms set identical levels of prices with no tendency to change. With only two firms competing, this

the LACTC serving switch exactly the same as any other of LACTC's five switches. (LACTC/McNelly R.T. at 1338/1339.) The reseller switch would retrieve the mobile phone's information and provide it to the LACT serving switch to perform its share of the validation process. The reseller switch would perform the recordation and billing function.

DRA also supports the principle of wholesale rate unbundling as a means of mitigating the market power concentrated in the hands of cellular duopolists and of enhancing competition. DRA recommends, however, that the unbundling requirement not apply to all dominant carriers, but only those who receive a bona fide request for unbundled wholesale services. DRA believes that it would be a waste of time and resources to unbundle wholesale services in rural markets, for example, where demand is too low to attract new providers.

2. Discussion

As an interim measure, we find no reason to delay the unbundling of the radio transmission bottleneck from other service functions based upon currently tariffed billing elements for those carriers in markets supported by sufficient demand and to the extent technically feasible. This limited measure requires no cost-of-service determinations since it allows cellular carriers to charge a market rate for these unbundled services. The record previously developed in D.92-10-026 and the comments filed in this Investigation form a sufficient basis to adopt this measure.

We have previously expressed our support for the concept of unbundling in D.92-10-026 in which we directed that switched-based resellers be allowed to purchase NXX codes directly from the LEC administrator of those codes, and to arrange landline interconnection directly with the LEC. In this manner, resellers would no longer be required to purchase bundled access numbers with airtime and other services from the cellular carriers.

Cellular carriers would have less power to control overall prices for cellular service and competition would be enhanced, carriers' denials that they have power to control prices through a "bottleneck" notwithstanding. Although we subsequently deferred implementation of cost-based unbundling as originally directed in D.92-10-026, we did not rescind our findings in D.92-10-026 at pp. 40-41 concerning the need for duopoly cellular carrier tariff unbundling.

This limited unbundling will enable switch-based resellers to acquire number blocks by ordering their own NXX codes and LEC interconnections as allowed under D.92-10-026, and avoid some charges to the cellular duopolist. Instead, switch-based resellers will pay for the direct costs of interconnection of their switches to the cellular MTSOs and maintain their own connections to the local exchange carrier.

Likewise, although the cellular carriers raise questions about what functions a reseller switch can or cannot perform, it is not necessary to determine precisely the technical capabilities of a reseller switch in order to implement the market-based unbundling adopted in this order. We acknowledge, as McCaw points out, that the equipment is not yet available to implement switching functions out to individual cell sites. Thus, the unbundling at this level is premature at this time.

We acknowledge that the reference in Appendix B.3 of the OII to unbundling of the "cell site radio segment" of carriers' operations is erroneous. As noted by CRA, we amend the reference to call for unbundling of the cost of the "bottleneck communications radio channel."

The reseller switch, as proposed by CSI, will not interfere with any of the "unitary" functions performed by the cellular carrier's MTSO. As CSI notes, the reseller switch will not actually switch and route the call on the wireless side, which remains the prerogative of the licensed carrier. The call will

continue to pass through the cellular carrier's MTSO(s). The reseller switch will identify mobile telephones with its NXX and will perform the billing, validation, and recordation function for calls to or from those telephones. As the FCC letter to CSI indicates, such functions are not "unitary" or technically preempted for federal purposes.

Contrary to the view of the cellular carriers, we do not interpret Section 332 of the Communications Act as prohibiting any modifications in specific state regulatory rules and procedures until the FCC acts on the CPUC petition to retain jurisdiction over mobile service carriers, which must occur by August 10, 1995. As stated in the FCC Second Order and Report (Sec. III F.2), it is the authority to regulate, not the specific rules in effect at some point in time which is subject to extension pending a ruling on the petition.

Moreover, there is no federal statute, policy, or rule that inhibits the interconnection and use of the reseller switch, as described in D.92-10-026. This is confirmed by the September 26, 1991 response of the FCC to CSI regarding CSI's query as to the legality of interconnection of a reseller switch to the LEC facilities and to the MTSO of the local cellular carrier. (Attachment A of CSI Reply Comments.) As cited by CSI, the record in I.88-11-040 indicates that there is no significant delay in call set-up time due to a reseller switch. (US West/Simpson R.T. at 1133; CSI/Raney R.T. at 775.)

In any event, we have already addressed the issue of the technical feasibility of the reseller switch in D.92-10-026 and need not relitigate the matter, as we stated in granting limited rehearing in D.93-05-069. In D.92-10-026, we acknowledged that CSI's reseller switch proposal at that time left unanswered questions concerning the specific design and method of interconnection which its switch would use. Nonetheless, we did not require resellers to prove the technical feasibility of their

proposed switches, just as the facilities-based carriers are not required to do so when they install a switch. We stated our reliance on market forces and technological advances to influence when resellers decide they are ready to move into the market as switch resellers. Our D.92-10-026 Finding 47 still applies that:

"There is no incentive for resellers to install a switch that is not technically and economically feasible and which cannot communicate with the switches of facilities-based carriers."

As a means of implementing our unbundling policy, we shall adopt DRA's recommendation that unbundling only be imposed for those dominant carriers who receive a bona fide request for unbundled service. As explained by DRA, a bona fide request must be accompanied by a construction or engineering plan describing how the provider would interconnect with the dominant carrier's MTSO. The interconnection plan would have to demonstrate the compatibility between the reseller's switch and the dominant carrier's MTSO.

Once a bona fide request for unbundled service is made, resellers would then follow the procedure as previously outlined in D.92-10-026:

"Those resellers that want to provide switching services currently being provided by facilities-based carriers should file a petition to modify thier current certificate of public convenience and necessity (CPCN) to operate as a switch reseller. One purpose in modifying the the CPCNs is to eliminate any language in the current CPCNs that prohibits resellers from operating facilities. A second purpose is to ensure compliance with the California Environmental Quality Act (CEQA). As part of its petition to modify, a reseller must compy with Rule 17.1 and include a Proponent's Envirnomental Assessment (PEA) as part of its filing for review by Commission staff. Resellers are reminded that cellualr facilities they wish to install subsequent to that covered in the CPCN modification

proceeding are subject to General Order 159."
(P. 32.)

B. Extended Area Service Concerns

Extended area service (EAS) refers to service rendered to a subscriber of another carrier's system while the subscriber is "roaming" outside his home carrier's system. The subscriber's home carrier re-rates other systems' widely differing roaming charges so that its subscriber pays a predictable roaming rate. Under our current policy, cellular carriers are granted authority to charge EAS, or roaming, rates for one year on a provisional basis, provided that the proposed rates are revenue neutral. After one year, carriers can file an application to make the rates a permanent part of their tariff.

McCaw filed an application requesting permission to set permanent roamer rates (A.93-01-034). In that proceeding, the ALJ issued a ruling on February 18, 1994 stating that before the McCaw or similar applications could be granted,

"...the legal issues raised in the OII need to be resolved, and the wireless OII now appears to be the most appropriate forum for doing so."

In accordance with the ALJ ruling, we shall resolve in this interim order the outstanding issues regarding EAS, such that outstanding applications to set permanent roamer rates for EAS service can be ruled upon.

As stated in the OII, EAS rules and practices should be consistent with our regulatory framework goals of stimulating market competition while protecting the public from anticompetitive behavior and abuse of market power. As noted in the OII, some contend that EAS results in cellular carriers reselling toll service without authorization and setting rates outside its geographic area. Others, have contended that EAS is anticompetitive.

We solicited parties' comments on the extent to which current EAS policies and practices are problematic or require change, and the long term effects of EAS on cellular rates and competition. We also solicited comments on the benefits offered by EAS for customers and providers.

1. Positions or Parties

LACTC notes that the Commission has before it several applications seeking authority for carriers to "re-rate" charges for their own customers when they roam into other markets, including McCaw's A.93-01-034. LACTC believes that if a carrier is willing to absorb a part of such charges for competitive reasons, thereby reducing the overall bill to the end user, the Commission should not hesitate to permit such rerating.

McCaw notes that a carrier's authority to re-rate roaming charges may be unclear because cellular CPCNs typically permit a carrier to construct facilities only in its cellular license area. McCaw does not believe this restriction should affect cellular EAS since no construction of facilities is involved in rendering EAS. McCaw proposes that the Commission simply clarify that mobile service providers are authorized to charge for EAS throughout the state, even though their FCC-defined service areas limit the territory where they may operate radio systems. Alternatively, the CPCNs could be amended to allow for cellular EAS.

DRA is concerned that the roaming rates set outside a carrier's service area may result in rate increases for some customers. For example, under some EAS rate structures, high volume callers or high per-minute callers could receive rate increases. DRA is also concerned that home carriers in some cases may charge its customer less than it is being charged by the foreign serving carrier, and then pass the loss on to the customer indirectly through rate increases for other services. Otherwise, home carriers who are small might be placed at an unfair disadvantage if they had to absorb losses due to differences in home versus foreign carrier rates, and might not be as able to provide similar service offerings as large carriers.

CERTIFICATE OF SERVICE

I hereby certify this 12th day of September, 1994 that a copy of the foregoing comments has been hand-delivered on the following parties:

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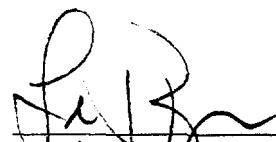
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